

List of Publications

Pekka T. Verronen

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Publication list also at <https://www.webofscience.com/wos/author/record/G-6658-2014>
(most recent publications might not be registered yet)

1. Seppälä, A., N. Kalakoski, **P.T. Verronen**, D.R. Marsh, A.Yu. Karpechko, and M.E. Szélag, Polar mesospheric ozone loss initiates downward coupling of solar signal in the Northern Hemisphere, *Nature Comm.*, *16*, 748, <https://doi.org/10.1038/s41467-025-55966-z>, 2025.
2. Häkkinen, T., Grandin, M., Battarbee, M., Szélag, M.E., Alho, M., Kotipalo, L., Kalakoski, N., **Verronen, P.T.**, and Palmroth, M.: Atmospheric odd nitrogen response to electron forcing from a 6D magnetospheric hybrid-kinetic simulation, *Ann. Geophys. Discuss.* [preprint], <https://doi.org/10.5194/angeo-2024-7>, in review, 2024.
3. Kalakoski, N., Verronen, P.T., Szélag, M.E., and Jackman, C.H., Global ozone loss following extreme solar proton storms based on the July 2012 coronal mass ejection, *Nature Sci. Rep.*, *13*, 13873, <https://doi.org/10.1038/s41598-023-40129-1>, 2023.
4. Sarris T., Palmroth M., Aikio A., Buchert S.C., Clemmons J., Clilverd M., Dandouras I., Doornbos E., Goodwin L.V., Grandin M., Heelis R., Ivchenko N., Moretto-Jørgensen T., Kervalishvili G., Knudsen D., Liu H.L., Lu G., Malaspina D.M., Marghita O., Maute A., Miloch W.J., Olsen N., Pfaff R., Stolle C., Talaat E., Thayer J., Tourgaidis S., **Verronen, P.T.**, and Yamauchi M., Plasma-neutral interactions in the lower thermosphere-ionosphere: The need for in situ measurements to address focused questions, *Front. Astron. Space Sci.*, *9*:1063190, <https://doi.org/10.3389/fspas.2022.1063190>, 2023.
5. Sarris, T. E. and Tourgaidis, S. and Pirnaris, P. and Baloukidis, D. and Papadakis, K. and Psychalas, C. and Buchert, S. C. and Doornbos, E. and Clilverd, M. A. and **Verronen, P. T.** and Malaspina, D. and Ahmadi, N. and Dandouras, I. and Kotova, A. and Miloch, W. J. and Knudsen, D. and Olsen, N. and Marghita, O. and Matsuo, T. and Lu, G. and Marchaudon, A. and Hoffmann, A. and Lajas, D. and Strømme, A. and Taylor, M. and Aikio, A. and Palmroth, M. and Heelis, R. and Ivchenko, N. and Stolle, C. and Kervalishvili, G. and Moretto-Jørgensen, T. and Pfaff, R. and Siemes, C. and Visser, P. and van den Ijssel, J. and Liu, H. and Sandberg, I. and Papadimitriou, C. and Vogt, J. and Blagau, A. and Stachlys, N., Daedalus MASE (Mission Assessment through Simulation Exercise): a toolset for analysis of in situ missions and for processing global circulation model outputs in the Lower Thermosphere-Ionosphere, *Front. Astron. Space Sci.*, *9*, 413, <https://doi.org/10.3389/fspas.2022.1048318>, 2023.
6. Nilsen, K., A. Kero, **P.T. Verronen**, M.E. Szélag ,Satellite-Borne Observations of Ozone Impact by the November 2001 Solar Proton Event, *J. Geophys. Res. Atmos.*, *127*, e2022JD036904, <https://doi.org/10.1029/2022JD036904>, 2022.
7. Szélag, M.E., D.R. Marsh, **P.T. Verronen**, A. Seppälä, and N. Kalakoski, Ozone impact from solar energetic particles cools the polar stratosphere, *Nature Commun.*, *13*, 6883, <https://doi.org/10.1038/s41467-022-34666-y>, 2022.

8. Baumann, C., Kero, A., Raizada, S. Rapp, M., Sulzer, M.P., **Verronen, P.T.**, and Vierinen, J., Arecibo measurements of D-region electron densities during sunset and sunrise: implications for atmospheric composition, *Ann. Geophys.*, *40*, 519–530, <https://doi.org/10.5194/angeo-40-519-2022>, 2022.
9. Bernhardt, P.A., M. Hua, J. Bortnik, Q. Ma, **P.T. Verronen**, M.P. McCarthy, D.L. Hampton, M. Golkowski, M.B. Cohen, D.K. Richardson, A.D. Howarth, H.G. James, and N.P. Meredith, Active Precipitation of Radiation Belt Electrons using Rocket Exhaust Driven Amplification (REDA) of Man-Made Whistlers, *J. Geophys. Res. Space*, *127*, e2022JA030358, <https://doi.org/10.1029/2022JA030358>, 2022.
10. Newnham, D.A., M.A. Clilverd, W.D.J. Clark, **P.T. Verronen**, and A.E.E. Rogers, Ground-based Ku-band microwave observations of ozone in the polar middle atmosphere, *Atmos. Meas. Tech.*, *15*, 2361–2376, <https://doi.org/10.5194/amt-15-2361-2022>, 2022
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